

STATISTICAL TECHNIQUE USED: EFFECT OF YOGIC PRACTICE ON IMMEDIATE MEMORY

Gulbahar khan*

ABSTRACT

The study under report was conducted to find out the effect of yogic practice on 'immediate memory'. Fifty high school students of Noida city, were engaged as subjects. The immediate memory of the subjects was measured by immediate memory test (Dixit, 1986). The test was administered on the selected subjects before and after yogic practices of three months. The data were analyzed by employing Mean, S.D. and 't' value. The immediate memory of post test (after yogic practices) is significantly higher in comparison to the pre test (before yogic practices). It means that yogic practices increase the immediate memory.

Keywords: Yogic practice, Memory, students, Training

* Assistant Professor, Noida College of Physical education, Noida (U.P.)

INTRODUCTION

Yoga is considered to be one of the most important, effective and valuable tool for man to overcome various physiological and psychological problems. Yoga helps the whole body to enable it to face with stress and strain. Yoga proposes healthy diet and encourages the natural process elimination, whenever it is necessary Yoga aims at an integrating all potentialities of person.

Immediate memory and stress are the major problems of the modern world, particularly of the youth and college going students, who are loosing their health and well-being. Immediate memory is defined as “the mental process of retaining information for later use and retrieving such information” (Birren, Sloane, & Cohen, 1992). Memory is classified into two categories, i. e. Short term memory and long term memory Short term memory is also known as episodic or working memory Short-term memory can last from a few second to one hour. Long-term memory can last for a life time (Lezak, 1995). Decreased cognitive functioning such as memory loss, is most frequently associated with again diseased and injury

Yogic practices play an important role in cognitive functioning. Elsayed, Ismail, and Young (1980) proposed three reasons why yogic exercise improved fitness and also enhanced cognitive functioning. They proposed that increased transportation of oxygen and glucose to the brain as well as increased self-esteem and decreased psychological distress, would result in improved performance on complex psychological task. Rogers, Meyer, and Mortel (1990) studying on 80 elderly volunteers proposed that regular participation in physical activity could minimize cognitive decline by sustaining optimal “cerebral perfusion”. Capaldi, Hawkins, and Kramer (1992) agreed with Rogers et al, that oxygen and blood to the brain affect mental function. They based this conclusion on the fact that cardiovascular conditioning through yogic exercise increases aerobic capacity and cardiac output by increased stroke volume and oxygen extraction. As a result, cardiovascular conditioning may reduce or reverse age related declines in mental function attributed to cardiovascular insufficiency. Molley et al. (1968) working on older adults found that after yogic exercise there was increase in logical memory Diesfeldt and Diesfeldt-Groenendijk (1977) also reported an improvement in recent memory following light exercise. The positive impact of yogic exercise on physical well-being has been well documented The relationship correlates with the extent to which the cardiovascular system is stressed and is quantifiable (Brooks & Fahey, 1984). The idea that yogic exercise improves mental attitude and performance has been the basis for many corporations establishing fitness programs.

The studies conducted in the field of physical education, are mostly concerned with short-term memory or long-term memory of cognitive

functioning. There are negligible studies pertaining to immediate memory and yogic practices. Hence, the present investigation aims at the following:

The objective of the present study was to examine the effect of yogic practices on immediate memory. It was hypothesized that there will be significant difference between the Mean immediate memory scores of pre test and post test condition.

METHODOLOGY

Sample:

First of all about 400 male students studying in high school and interested in yoga exercises were selected from NOIDA PUBLIC SCHOOL of NOIDA city. Among them, fifty students were finally selected through simple random sampling method .

Tool:

Immediate memory test: Immediate memory of the subjects was measured by an 'immediate memory test' constructed by Dixit (1986).

Procedure:

The immediate memory of the selected subjects was assessed by the above mentioned test before and after the training of yogic practices. The choice of yogic practices, namely Asana, Pranayama, and Dhyana were made on the basis of experts' advice acquired. The investigator conducted pre- research tour and visited various yoga centers for conversation with experts in the field of yoga to gain practical' experiences.

In the present study, the subjects were tested (pre test- post test) on the aforementioned measure to find out the significance of difference between Mean scores of pre test and post test conditions. For this, t-value was computed while calculating Mean, Standard Deviation (S.D.), Standard Error (SE.), Standard Error of Difference (SED.) and Co- efficient of correlation (r).

Research Design:

As mentioned earlier the present study was designed to examine the effect of yogic practices on immediate memory of the selected subjects. The immediate memory test was administered to the subjects before yogic practices and after the training (yogic practices) of three months, thus a single group was tested at two times (pre and post), so it tends be a single group design.

RESULT AND DISCUSSION

As reported earlier, the Mean immediate memory scores of the subjects were obtained under pre test and post test condition to observe the effect of yogic practices on immediate memory and significance of difference was find out using t-test. The Mean, S.D., S.E., S.E.D." Coefficient of Correlation along with 't' "value have been present d in Table no. 1. The comparison of mean immediate memory scores of pre test and post test condition is also presented through Bar diagram appeared in figure 1.

Results of analysis indicates that the Mean immediate memory scores of post test is higher in comparison to Mean immediate memory scores of pre test condition. The obtained t-value is found to significant at .01 level of confidence. Thus, the hypothesis of the present study is accepted The finding of the investigation indicates that immediate memory is improved after the yogic practices for three months.

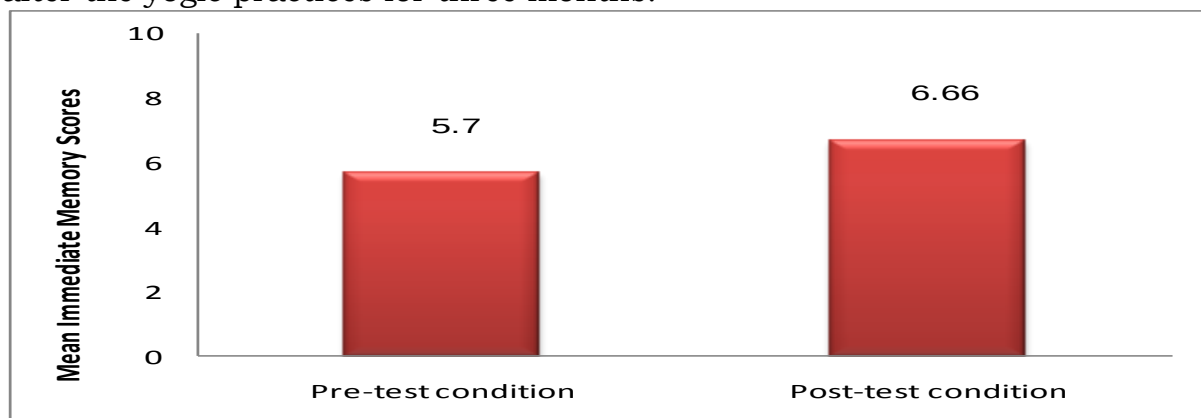


Figure 1: A comparison between Mean immediate memory scores of pre-test and post test conditions

On the basis of this result, it may be said that yogic practices improve the immediate memory of the subjects. The present finding gets support from the studies of various investigators who reported improvement in memory after different yogic exercises. Elsayed, Ismail, and Young 1980; Roger, Meyer, and Mortel, 1990 indicate that yogic practices significantly increase the immediate memory level of practioners. In fact, due to yogic practices including sarvangsana, halasana, matsyaasana, bhramari pranayama, ujjayi, nari shodhan, and om dharna and dhyana vigilance, introspective awareness, and will power are developed result in improved immediate memory.

CONCLUSION

The Mean immediate memory of the post test condition is significantly higher in comparison to the Mean immediate memory scores of pre test condition. Summarily, we may state that yogic practices increase the immediate memory of the subjects.

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